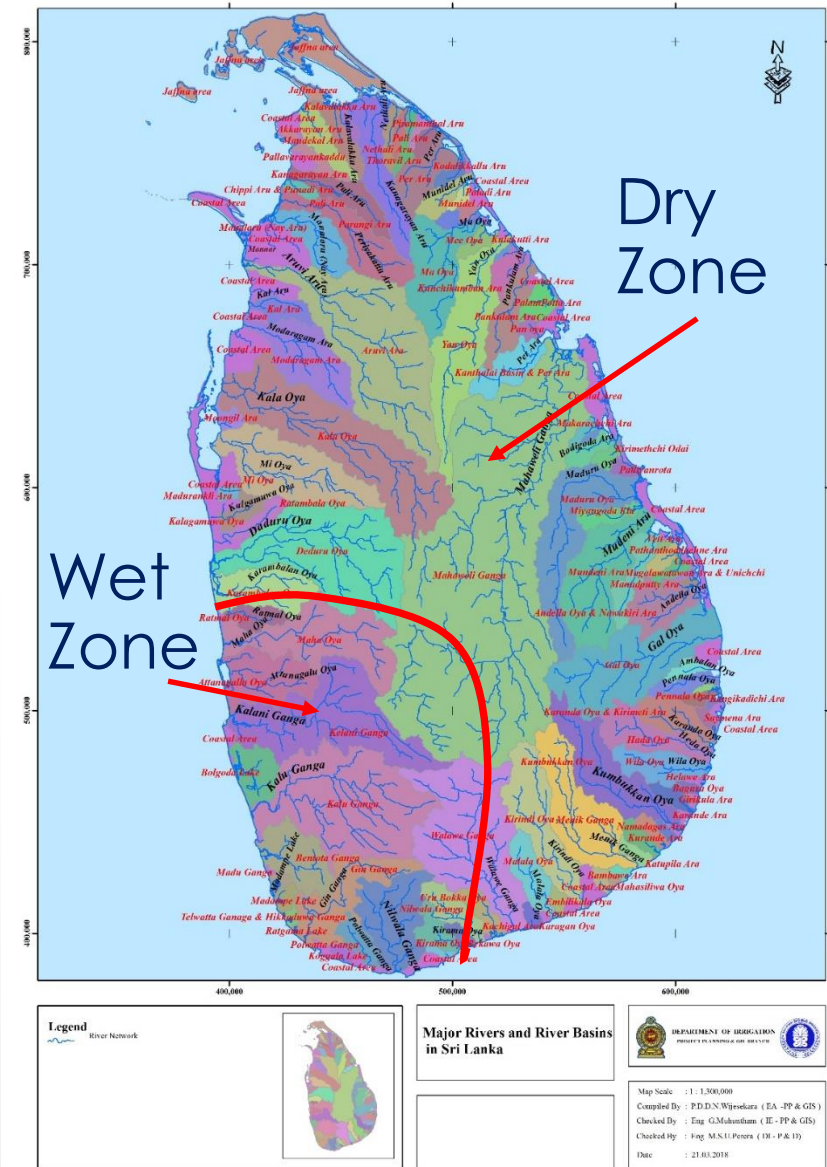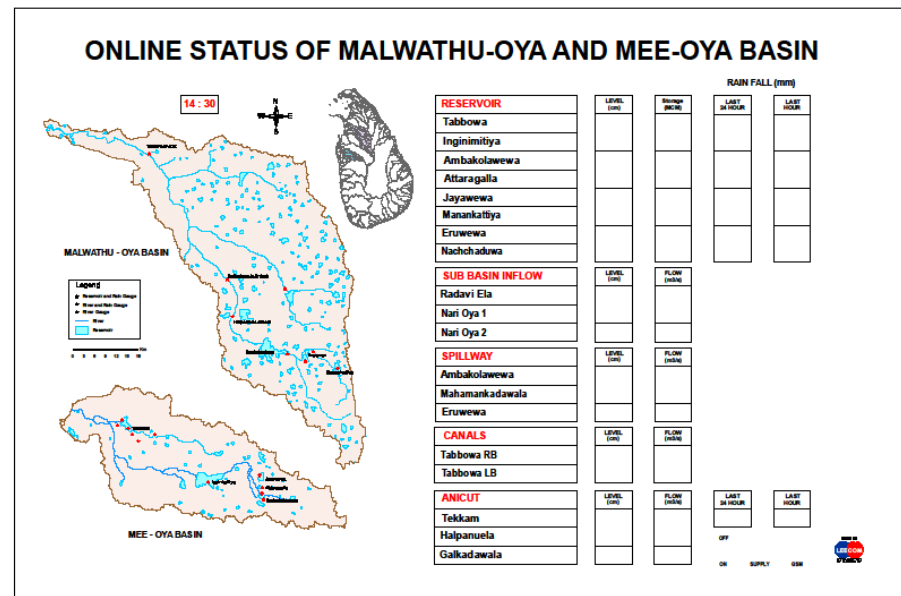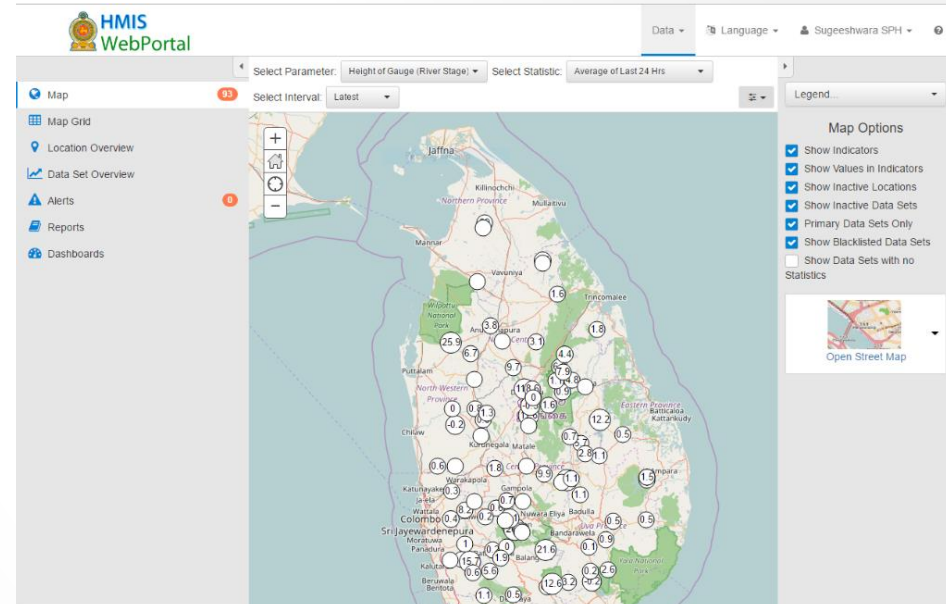## Introduction to River System and Flood Situation in Sri Lanka

- There are 103 river basins.

- Around 25 river basins are vulnerable for floods.

- Almost all of the south-western river basins are vulnerable for floods (ex: Kalu, Gin, Nilvala, Bentara, Attanagalu Oya).

- Most of the eastern, north central, and north eastern river basins are vulnerable for both flood and drought (Ex: Malvathu Oya, Mundeni Aru, Mahaweli, Yan Oya, Gal Oya, Deduru Oya etc.

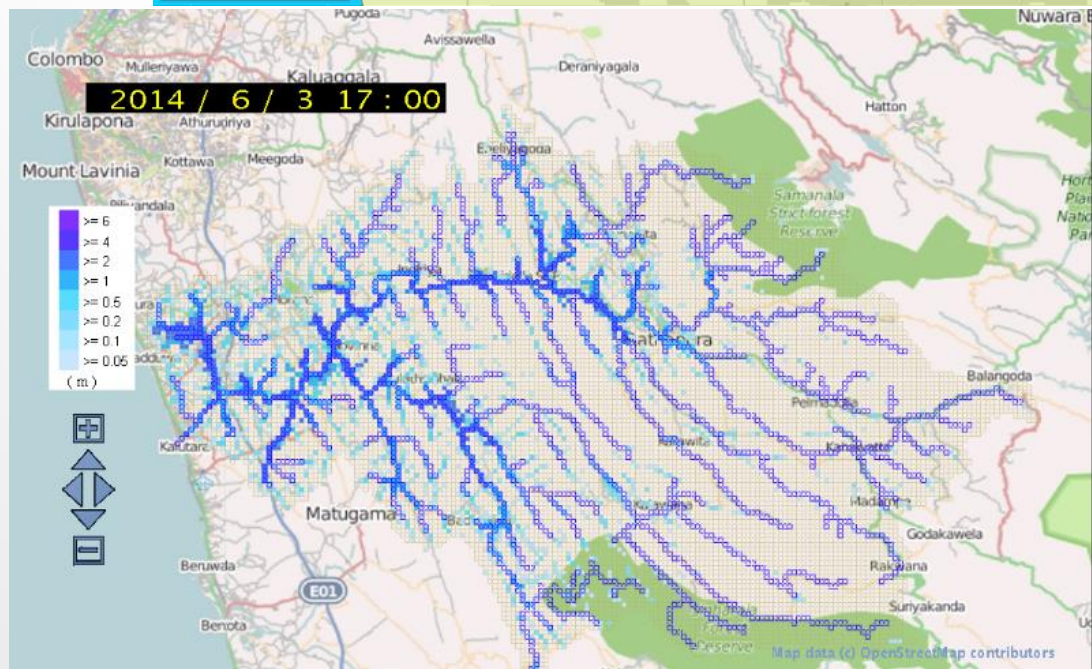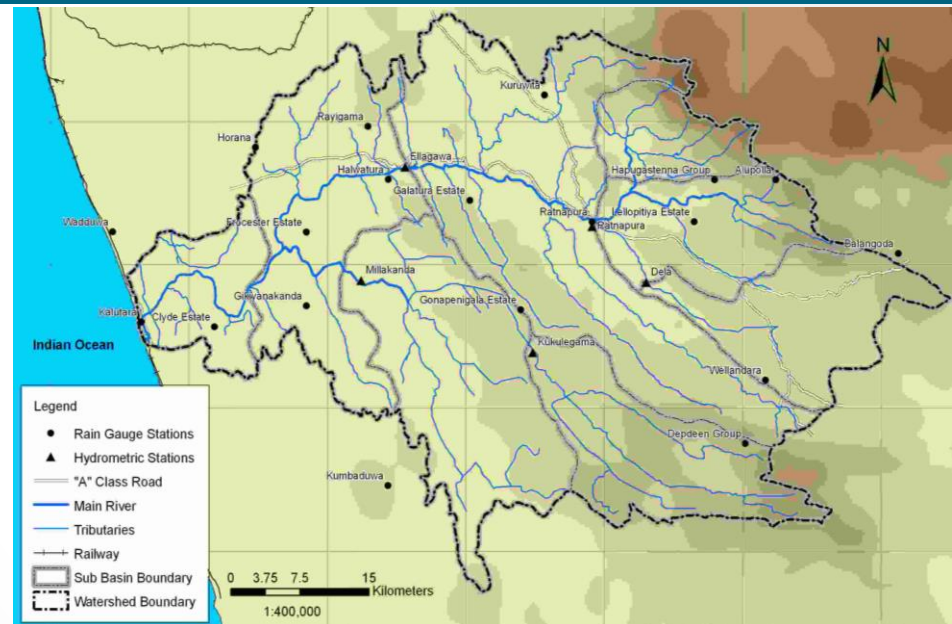

Major Rivers and River Basins in Sri Lanka

Map Scale : 1 : 1,300,000
Compiled By : P.D.D.N.Wijesekara (EA -PP & GIS)
Checked By : Eng. G.Muhunthan (IE - PP & GIS)
Checked By : Eng. M.N.U.Perera (DI - P & I)
Date : 21.03.2018

FLOOD EARLY WARNING AND R/F MONITORING

- **Real Time R/F and River Stage monitoring system containing around 135 river gauges and 160 rainfall stations island wide (HMIS).**
- **Flood early warning is mainly based on the HMIS system.**
- **Separate online Systems for Malwathu Oya and Mee Oya for flood and drought monitoring.**
- **Plans are underway to enhance HMIS monitoring system by increasing number of monitoring stations and incorporating flood forecasting and dissemination systems.**

ONLINE STATUS OF MALWATHU-OYA AND MEE-OYA BASIN
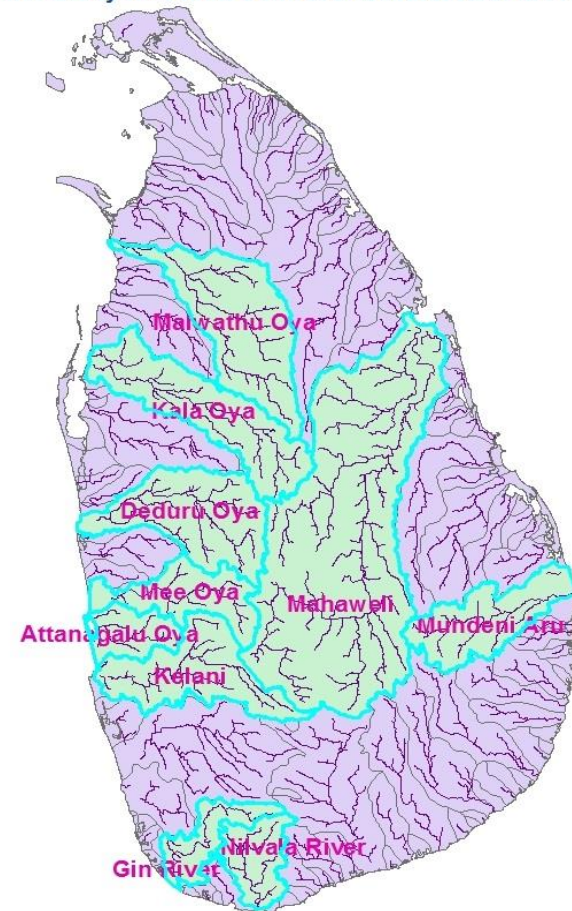
FLOOD EARLY WARNING AND R/F MONITORING

- **ID has developed a flood forecasting model for Kalu River with the support of ICHARM and JAXA using RRI**
- **Dissemination system is not successful yet (need support).**
- **Expect to enhance this system for some more river basins.**

Legend
- Rain Gauge Stations
- Hydrometric Stations
- "A" Class Road
- Main River
- Tributaries
- Railway
- Sub Basin Boundary
- Watershed Boundary

0   3.75 7.5   15 Kilometers

1:400,000

2014 / 6 / 3 17:00

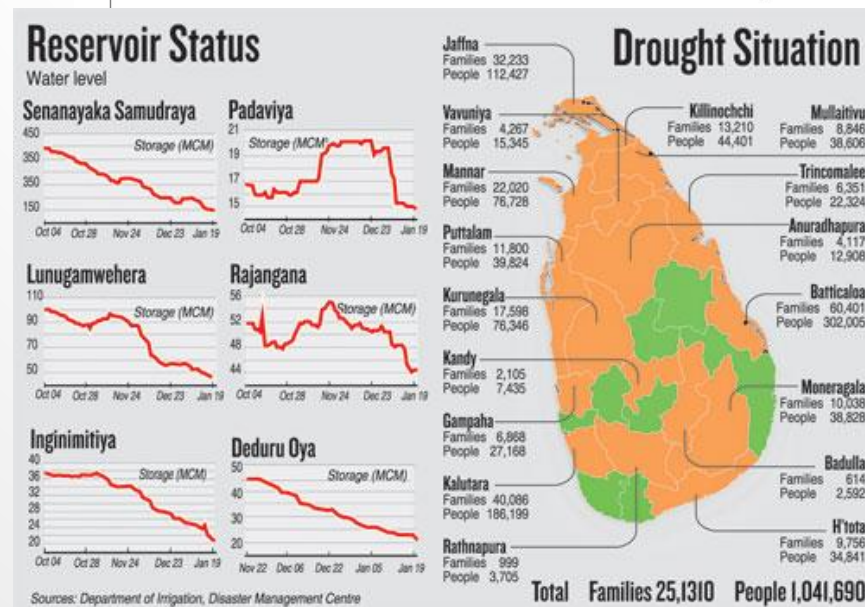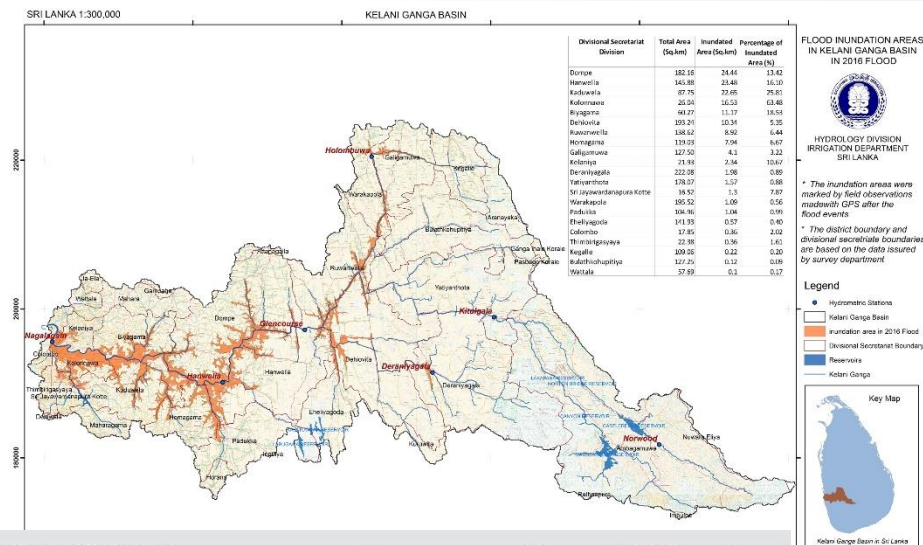# ADAPTATION PLANNING: CLIMATE CHANGE, URBANIZATION

- Ministry of Irrigation and Water Resources & Disaster Management with Irrigation Department has started a detail study for critical 11 river basins covering almost one half of the country.
- The main task is to prepare an investment plan for these 11 river basins for mitigating flood and droughts considering climate change and future development scenarios.
- ID has initiated to study other basins too. However we expect international support in this regards.

River Basins Under Study for Flood Control and Water Resources

3. ECONOMIC EFFECT OF FLOOD AND DROUGHT DISASTERS

- Highly urbanized area of Kelani River went under flood in June 2016.Economic Damage was estimated to be 100 Billion LKR.

- In May 2017 severe flood attack mainly 5 river basins, Kalu, Gin, Nilvala, Kelani & Attanagalu Oya. The damage was estimated to be more than 150 Billion LKR.

- Need simple loss and damage estimation methods and train government staff on such exercises.

- Need to develop comprehensive and collaborative action plans for minimizing loss and damage caused by floods.

Thank You All